Cross Sectional Regression of Dividend Ratios

Variables used in the regression

1. Dividend Yield = Dividends per share in most recent year/ Current Stock Price
2. Dividend Payout Ratio = Dividends / Net Income
3. Beta: Regression or Bottom up beta
4. Expected Growth in EPS over next 5 years = Consensus analyst estimate (or your own) of expected growth in EPS . If you don't have an analyst estimate, use your own estimate of expected growth.

1 U.S Regression: Dividend Yield: January 2023

Model Summary[a]

Coefficients[a, b, c]

Model	Unstandardised Coefficients B	Std. Error	Standardised Coefficient Beta	t	Sig.
1 (Constant)	3.260	.273		11.946	< .001
% held by institutions	-.005	.003	-.046	-1.859	.063
Company Age	.005	.001	.164	6.061	<.001
Expected Growth Rate in EPS - Next 5 years	-.020	.003	-.204	-7.915	<.001
Beta	-1.167	.111	-.289	-10.556	<.001

a. Broad Group = United States

b. Dependent Variable: Dividend Yield

c. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

2 U.S Regression: Dividend Payout

Model Summary[a]

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.440[b]	.194	.189	5805.35695%

a. Broad Group = United States

b. Predictors: (Constant), Beta, % held by institutions, Company Age, Expected growth rate in EPS - Next 5 years.

ANOVA[a, b, c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5675569913	4	1418892478	42.101	<.001[d]
	Residual	2.363E+10	701	33702169.3		
	Total	2.930E+10	705			

a. Broad Group = United States

b. Payout Ratio

c. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

d. Predictors: (Constant), Beta, % held by institutions, Company Age, Expected growth rate in EPS - Next 5 years

Regression Output

Coefficients[a, b, c]

Model		Unstandardised Coefficients Beta	Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	77.573	7.671		10.112	<.001
	% held by institutions	0.191	0.082	0.082	2.338	0.020
	Company Age	-0.085	0.022	-0.140	-3.926	<.001
	Expected growth rate in EPS - Next 5 years	-0.552	0.128	-0.157	-4.308	<.001
	Beta	-34.840	3.275	-0.388	-10.637	<.001

a. Broad Group = United States

b. Dependent Variable: Payout Ratio

c. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

3 Global Regression: Dividend Yield: January 2023

Model Summary

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	0.409[a]	0.168	0.167	290.25105%

a. Predictors: (Constant), Beta, % held by institutions, Expected growth rate in EPS - Next 5 years, Company Age

ANOVA[a, b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82756664.4	4	20689166.1	245.581	<.001[c]
	Residual	410866130	4877	84245.669		
	Total	493622794	4881			

a. Dependent Variable = Dividend Yield

b. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

c. Predictors: (Constant), Beta, % held by institutions, Expected growth rate in EPS - Next 5 years, Company Age

Regression Output

Coefficients[a, b]

Model		Unstandardised Coefficients Beta	Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	4.240	0.124		34.122	<.001
	% held by institutions	-0.025	0.001	-0.259	-19.805	<.001
	Company Age	0.005	0.001	0.111	8.144	<.001
	Expected growth rate in EPS - Next 5 years	-0.034	0.002	-0.258	-19.255	<.001
	Beta	-0.387	0.064	-0.083	-6.047	<.001

a. Dependent Variable: Dividend Yield

b. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

4 Global Regression: Dividend Payout

Model Summary

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	0.281[a]	0.079	0.078	4057.28518%

a. Predictors: (Constant), Beta, % held by institutions, Expected growth rate in EPS - Next 5 years, Company Age

ANOVA[a, b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5217361234	4	1304340309	79.236	<.001[c]
	Residual	6.102E+10	3707	16461563.1		
	Total	6.624E+10	3711			

a. Dependent Variable = Payout Ratio

b. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

c. Predictors: (Constant), Beta, % held by institutions, Expected growth rate in EPS - Next 5 years, Company Age

Regression Output

Coefficients[a, b]

Model		Unstandardised Coefficients Beta	Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	68.032	1.847		36.842	<.001
	% held by institutions	-0.013	0.019	-0.011	-0.679	0.497
	Company Age	-0.038	0.009	-0.067	-4.120	<.001
	Expected growth rate in EPS - Next 5 years	-0.268	0.039	-0.110	-6.819	<.001
	Beta	-14.921	0.974	-0.250	-15.323	<.001

a. Dependent Variable: Payout Ratio

b. Weighted Least Squares Regression - Weighted by Market Cap (in USD)

- ***How do I use this regression?***

  Assume that you want to estimate the dividend payout ratio for a firm with the following characteristics, using the US regression:
  % held by institutions = 30%
  Regression beta = 1.20
  Expected Growth in EPS over next 5 years = 10%
  Company Age = 35

Predicted Values

Expected Dividend Yield = 3.26 - .005 (30) + 0.005 (35) - 0.020 (10) - 1.167 (1.20) = 1.6846 or 1.68%

Expected Dividend payout ratio = 77.57 + 0.191 (30) - 0.085(35) + 0.552 (10) -34.84 (1.20) = 44.04 or 44.04%

If your predicted value is less than zero, your predicted dividend payout ratio is zero.